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IS : 3625 (Part 2) - 1984

Indian Standard
SPECIFICATION FOR
WARP TUBES FOR RING SPINNING AND
DOUBLING SPINDLES
PART 2 RECOMMENDED DIMENSIONS FOR
TUBES, TAPER 1 : 38
(*Second Revision*)

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

**SPECIFICATION FOR
WARP TUBES FOR RING SPINNING AND
DOUBLING SPINDLES**

**PART 2 RECOMMENDED DIMENSIONS FOR
TUBES, TAPER 1 : 38**

(Second Revision)

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Indian Standard
**SPECIFICATION FOR
WARP TUBES FOR RING SPINNING AND
DOUBLING SPINDLES**

**PART 2 RECOMMENDED DIMENSIONS FOR
TUBES, TAPER 1 : 38**

(Second Revision)

0. FOREWORD

0.1 This Indian Standard (Part 2) (Second Revision) was adopted by the Indian Standards Institution on 10 September 1984, after the draft finalized by the Textile Mill Accessories (Other Than Jute) Sectional Committee had been approved by the Textile Division Council.

0.2 The recommended dimensions of tubes included in the standard are based on ISO 368 Tubes for ring spinning, doubling and twisting spindles with taper 1 : 38 and 1 : 64 issued by the International Organization for Standardization (ISO).

0.3 Other requirements, such as type, material, finish, concentricity, water absorption and steam conditioning are specified in Part 1 of the standard.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard recommends dimensions (length and inside diameter) of tubes with taper 1 : 38 for ring spinning and doubling spindles.

1.2 It also specifies the dimensions and tolerances for the gauges for checking the tubes.

*Rules for rounding off numerical values (revised).

2. DIMENSIONS

2.1 The recommended dimensions are given in Table 1 read with Fig. 1A and 1B.

3. DIMENSIONS FOR GAUGES

3.1 The dimensions and tolerances of gauges for tubes of Types A and B are given in Tables 2 and 3 read with Fig. 2A and Fig. 2B respectively.

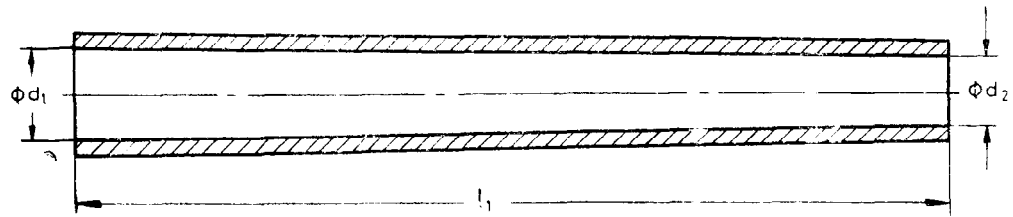
TABLE 1 DIMENSIONS OF TUBES

(Clause 2.1)

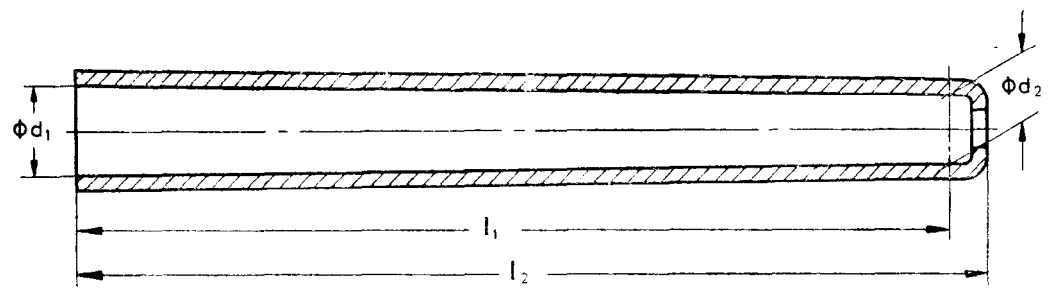
All dimensions in millimetres.

LENGTH		SERIES 0		SERIES 1		SERIES 2		SERIES 3	
l_1	l_2	d_1	d_2	d_1	d_2	d_1	d_2	d_1	d_2
200	210	22·26	17·00	20·26	15·00	18·76	13·50	—	—
(210)	(220)	22·27	16·75	20·27	14·75	18·77	13·25	—	—
220	230	24·28	18·50	22·28	16·50	20·28	14·50	18·78	13·00
(230)	(240)	24·30	18·25	22·30	16·25	20·30	14·25	18·80	12·75
240	250	27·31	20·00	24·31	18·00	22·31	16·00	20·31	14·00
(250)	(260)	27·32	20·75	24·32	17·75	22·32	15·75	20·32	13·75
260	270	30·34	23·50	27·34	20·50	24·34	17·50	22·34	15·50
(270)	(280)	30·35	23·25	27·35	20·25	24·35	17·25	22·35	15·25
280	290	33·36	26·00	30·36	23·00	27·36	20·00	24·36	17·00
(290)	(300)	33·37	25·75	30·37	22·75	27·37	19·75	24·37	16·75
300	310	36·39	28·50	33·39	25·50	30·39	22·50	27·39	19·50

The values in brackets should be avoided wherever possible.



1A Tube Type A with Open Top



1B Tube Type B with Rolled-in Top

FIG. 1 WARP TUBES — DIMENSIONS

TABLE 2 DIMENSIONS AND TOLERANCES FOR GAUGES FOR TUBES, TYPE A

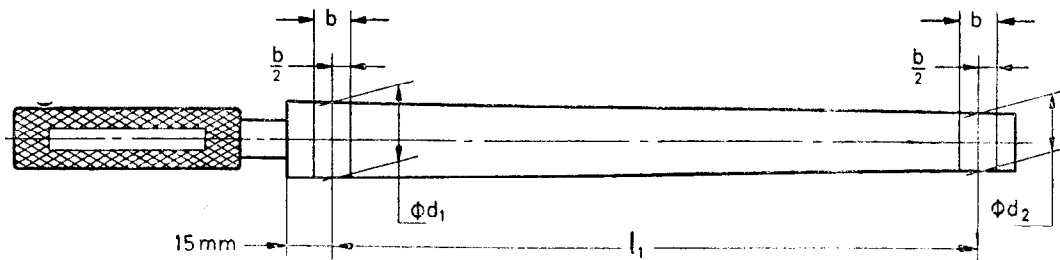
(Clause 3.1)

All dimensions in millimetres.

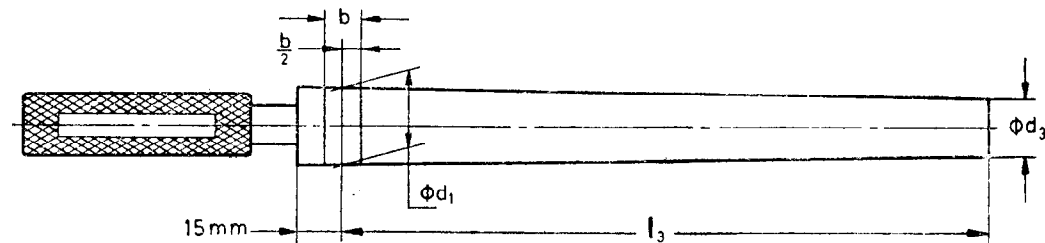
LENGTH l_1 ± 2	SERIES 0		SERIES 1		SERIES 2		SERIES 3		b ± 0.1
	d_1^*	d_2^*	d_1^*	d_2^*	d_1^*	d_2^*	d_1	d_2^*	
200	22.26	17.00	20.26	15.00	18.76	13.50	—	—	6
210	22.27	16.75	20.27	14.75	18.77	13.25	—	—	
220	24.28	18.50	22.28	16.50	20.28	14.50	18.78	13.00	
230	24.30	18.25	22.30	16.25	20.30	14.25	18.80	12.75	
240	27.31	21.00	24.31	18.00	22.31	16.00	20.31	14.00	8
250	27.32	20.75	24.32	17.75	22.32	15.75	20.32	13.75	
260	30.34	23.50	27.34	20.50	24.34	17.50	22.34	15.50	
270	30.35	23.25	27.35	20.25	24.35	17.25	22.35	15.25	
280	33.36	26.00	30.36	23.00	27.36	20.00	24.36	17.00	10
290	33.37	25.75	30.37	22.75	27.37	19.75	24.37	16.75	
300	36.39	28.50	33.39	26.50	30.39	22.50	27.39	19.50	

NOTE — The marks $\pm b/2$ at the small end of the gauge are used only for checking the internal diameter at the top of the tube. For checking the internal diameter at the base of the tube by means of the corresponding marks on the gauge, the tubes must be cut into parts.

*Tolerance js6 (see IS : 919-1963 Recommendations for limits and fits for engineering).



2A Gauge with Taper 1 : 38 for Tube Type A



2B Gauge with Taper 1 : 38 for Tube Type B

FIG. 2 DIMENSIONS OF GAUGES FOR WARP TUBES

TABLE 3 DIMENSIONS AND TOLERANCES FOR GAUGES FOR TUBES, TYPE B

(Clause 3.1)

All dimensions in millimetres.

LENGTH OF CORRESPOND- ING TUBE l_2	LENGTH l_1 ± 0.2	SERIES 0		SERIES 1		SERIES 2		SERIES 3		b ± 0.1
		d_1^*	d_2^*	d_1^*	d_2^*	d_1^*	d_2^*	d_1^*	d_2^*	
210	200	22.26	17.00	20.26	15.00	18.76	13.50	—	—	6
(220)	210	22.27	16.75	20.27	14.75	18.77	13.25	—	—	
230	220	24.28	18.50	22.28	16.50	20.28	14.50	18.78	13.00	
(240)	230	24.30	18.25	22.30	16.25	20.30	14.25	18.80	12.75	
250	240	27.31	21.00	24.31	18.00	22.31	16.00	20.31	14.00	8
(260)	250	27.32	20.75	24.32	17.75	22.32	15.75	20.32	13.75	
270	260	30.34	23.50	27.34	20.50	24.34	17.50	22.34	15.50	
(280)	270	30.35	23.25	27.35	20.25	24.35	17.25	22.35	15.25	
290	280	33.36	26.00	30.36	23.00	27.36	20.00	24.36	17.00	10
(300)	290	33.37	25.75	30.37	22.75	27.37	19.75	24.37	16.75	
310	295	36.39	28.63	33.39	25.63	30.39	22.63	27.39	19.63	

NOTE — For checking the internal diameter at the base of the tube by means of the corresponding marks on the gauge, the tube must be cut into parts.

*Tolerance js6 (see IS : 919-1963 Recommendations for limits and fits for engineering).

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

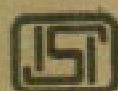
QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²



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